

Implementation Plan

Summary Description:

The Implementation Plan describes how the automated system or situation will be deployed, installed and transitioned into an operational system or situation. The plan contains an overview of the system or situation, a brief description of the major tasks involved in the implementation, the overall resources needed to support the implementation effort (such as hardware, software, facilities, materials, and personnel), and any site-specific implementation requirements.

Status:

Mandatory – All new system or situation development projects and any automated systems undergoing new major architectural design or functional changes (including GOTS and/or COTS integrations) must prepare some form of an Implementation Plan, as appropriate. The actual content of the Implementation Plan will be dependent on the specific circumstances of the IT project.

Timeframe:

The Implementation Plan is initiated during the [Design & Engineering Phase](#) and is baselined during the [Development Phase](#). The Implementation Plan serves as the primary input for the [Implementation Readiness Review \(IRR\)](#) and provides necessary guidance during the subsequent [Implementation & Testing Phase](#). To ensure implementation is successful and objectives are achieved, it is important that the Implementation Plan be maintained as a “living” document. The Implementation Plan should therefore be actively monitored and regularly reviewed and updated throughout the Implementation & Testing Phase. The Implementation Plan also serves as input to the [Operational Readiness Review \(ORR\)](#).

Responsible Reviewing Component:

[OIS/PMSG](#), in conjunction with [OIS/TMG](#), is the CMS component that has the primary decision authority over the need for the Implementation Plan, requirements for its creation, and acceptance of the end product in meeting the information needs.

Primary Information Exchange Partners:

The following are the primary stakeholders who have an interest in the content of the Implementation Plan:

[Project Owner/Manager](#)

[System Owner/Manager](#)

[System Developer](#)

[System Maintainer](#)

[OIS/EDG](#)

[OIS/PMSG](#)

[OIS/TMG](#)

[OIS/SSG](#)

[IT Infrastructure Implementation Agent or Contractor](#)

[IV&V Contractor](#)

Government Responsibilities:

The [Project Owner/Manager](#) is responsible for ensuring that an Implementation Plan is available for the automated system or situation that is to be implemented and tested. The Project Owner/Manager and Office of Information Services should actively monitor and regularly review the Implementation Plan during the Implementation & Testing Phase. The Implementation Plan will be used as a basis for monitoring the progress and success of implementation. If a system is being developed in-house without outside contractor resources, then the government developers are responsible for the contractor responsibilities described below.

Contractor Responsibilities:

The [System Developer](#) is responsible for preparing an Implementation Plan for the automated system or situation that is being delivered to the Government for implementation and testing. The System Developer may have to work with the [IT Infrastructure Implementation Agent or Contractor](#) to complete the Implementation Plan. The Implementation Plan is a configuration item that the System Developer is responsible for actively monitoring and updating during the Implementation & Testing Phase. The System Developer should perform an informal review of the Implementation Plan at the contractor's site prior to delivery of the Implementation Plan to CMS for formal review. The System Developer shall provide the Implementation Plan to CMS in both hardcopy and softcopy.

Content:

The following represents the basic outline of a standard Implementation Plan:

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 - 6.1.4. Site Rollback Plan

Appendices

Glossary

See [Implementation Plan Content \(PDF – 34 KB\)](#) for a detailed description of the expected content for each of the major components of the Implementation Plan.

Guidance:

If you need additional assistance and guidance with the Implementation Plan, contact your designated [Component Lead](#), who will put you in touch with a representative from OIS to assist you.

Review Process:

The Implementation Plan serves as the primary input to the [Implementation Readiness Review \(IRR\)](#) and also serves as input to the subsequent [Operational Readiness Review \(ORR\)](#). The information contained in the Implementation Plan is utilized by the Office of Information Services (OIS) and CMS' IT Infrastructure Implementation Agent or Contractor for the purpose of ensuring that all necessary actions are taken to prepare for the implementation and subsequent operation of the automated system or situation.

Date Created/Modified:

April 2005

Implementation Plan Content

The following is an outline and description for each of the major components of the Implementation Plan:

Title Page

Revision Chart

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1. Introduction

[Provide full identifying information for the automated system, application, or situation for which the Implementation Plan applies, including as applicable, identifications number(s), title(s)/name(s), abbreviation(s)/ acronym(s), part number(s), version number(s), and release number(s). Summarize the purpose of the document, the scope of activities that resulted in its development, its relationship to other relevant documents (e.g., System Security Plan (SSP) and/or Information Security (IS) Risk Assessment (RA), Release Plan, Data Conversion Plan, Version Description Document (VDD), Test Plan, Training Plan, User Manual and Operator Manual, if they exist), the intended audience for the document, and expected evolution of the document. Also describe any security or privacy considerations associated with use of the Implementation Plan.]

2. Referenced Documents

[Provide identifying information for all documents used to arrive at and/or referenced within the Implementation Plan (e.g., related and/or companion documents, prerequisite documents, relevant technical documentation, etc.).]

3. System/Situation Overview

[Briefly describe the purpose and context for the system or situation, and summarize the history of its development. Include the high-level context diagram(s) for the system and subsystems previously provided in the System Design Document (SDD), updated as necessary to reflect any changes that have been made based on more current information or understanding. If the high-level context diagram has been updated, identify the changes that were made and why.]

3.1. System/Situation Description

[Provide an overview of the processes that the system or situation is intended to support. If applicable, provide a general description of the type of data maintained and the operational sources and uses of those data. This information may be obtained from the SDD.]

3.2. System/Situation Organization

[Provide a brief description of the system or situation architecture and the major system/situation components essential to the implementation. Describe hardware, software, and communications, as appropriate. Include any charts, diagrams, and/or graphics as necessary. This information may be obtained from the SDD, Section 5. System Architecture.]

4. Implementation Overview

[Briefly summarize the implementation effort that is described in detail in the following subordinate sections.]

4.1. Implementation Description

[Describe the planned deployment, installation, and implementation approach.]

4.2. Points of Contact

[Provide the names of the responsible organization(s), and titles and telephone numbers of the staff who serve as points of contact for the system or situation implementation. These points of contact could include the CMS Sponsoring Component and/or Lead Component, Business Owners/Partners, Project Owner/Manager and/or Project Leader, Component Lead, System Owner/Manager, System Developer, and others with responsibilities relating to the implementation. The site implementation representative for each field installation or implementation site should also be included, if appropriate. Provide identifying and contact information for all managers and staff with whom the implementation must be coordinated.]

4.3. Major Tasks

[Provide a brief description of each major task required for the implementation of the system or situation. Add as many subsections as necessary to this section to describe all of the major tasks adequately. The tasks described in this section are not site-specific, but generic or overall project tasks that are required to install hardware and software, prepare data, and verify the system or situation. Include the following information for the description of each major task, if appropriate:

- What the task will accomplish;
- Resources required to accomplish the task;
- Assumptions and constraints associated with the task;
- Identified risks and planned mitigations associated with the task;
- Reference documents applicable to the task;
- Criteria for successful completion of the task;
- Miscellaneous notes and comments.

Examples of some major tasks to consider include the following:

- Providing overall planning and coordination for the implementation;
- Obtaining personnel for the implementation team;
- Providing appropriate training for personnel;
- Ensuring all documentation applicable to the implementation are available when needed;
- Acquiring special hardware, software, or network facilities;
- Preparing site and support facilities for implementation;
- Installing and configuring the various components of the operational environment;
- Providing all needed technical assistance;
- Scheduling any special computer processing required for the implementation;
- Performing site surveys before implementation;
- Performing system or situation transition activities;
- Performing data conversion before loading data into the system;
- Ensuring that all prerequisites have been fulfilled before the implementation date.]

4.4. Implementation Schedule

[Provide a schedule of activities to be accomplished during implementation. Show the required tasks (described in Section 4.3, Major Tasks) in chronological order, with beginning and ending dates of each task, the key person(s) responsible for the task, dependencies, and milestones. If appropriate, charts and graphics may be used to present the schedule.]

4.5. Security & Privacy

[Reference the appropriate sections of the System Security Plan (SSP) and/or Information Security (IS) Risk Assessment (RA) that address the system security features and requirements that will be applicable to the system or situation during implementation, including the primary security features associated with the system hardware and software. Address security issues specifically related to the implementation effort, if any. If the system is covered by the Privacy Act, describe the privacy concerns. Security and protection of sensitive data and information should be discussed, if applicable. For example, if LAN servers or workstations will be installed at a site with sensitive data preloaded on non-removable hard disk drives, address how security would be provided for the data on these devices during shipment, transport, and installation because theft of the devices could compromise the sensitive data.]

5. Implementation Support

[Describe the support equipment, software, facilities, and materials required for the implementation, as well as the personnel requirements and training necessary for the implementation. The information provided in this section is not site-specific. If there are additional support requirements not covered by the subsequent sections, others may be added as needed.]

5.1. Infrastructure & Data Support

[Identify the support equipment (hardware), software, data, facilities and materials required for the implementation, if any.]

5.1.1. Hardware

[Provide a list of support equipment and include all hardware used for testing the implementation. For example, if a client/server database is implemented on a LAN, a network monitor or “sniffer” might be used, along with test programs, to determine the performance of the database and LAN at high-utilization rates. If the equipment is site-specific, list it in Section 6, Implementation Requirements/Procedures by Site.]

5.1.2. Software

[Reference the associated Version Description Document (VDD) for a list of software and databases required to support the implementation. The VDD should identify the software by name, acronym, vendor, and configuration item identifier. The VDD should also include any commercial off-the-shelf (COTS) and/or Government off-the-shelf (GOTS) software. In addition, identify any software used to facilitate the implementation process, such as software specifically designed for automating the installation process. If the software is site-specific, list it in Section 6, Implementation Requirements/ Procedures by Site.]

5.1.3. Data

[Describe specific data preparation requirements and data that must be available for the system or situation implementation. An example would be the assignment of individual IDs associated with data preparation. Include reference to the Data Conversion Plan, if applicable. If the data and data preparation requirements are site-specific, provide this information in Section 6, Implementation Requirements/Procedures by Site.]

5.1.4. Facilities

[Identify the physical facilities and accommodations required during implementation. Examples include physical workspace for assembling and testing hardware components, desk space for software installers, and classroom space for training the implementation staff. Specify the hours

per day needed, number of days, and anticipated dates. If the facilities needed are site-specific, provide this information in Section 6, Implementation Requirements/Procedures by Site.]

5.1.5. Materials

[Provide a list of required support materials, such as CD-ROMs, cartridge media and disk packs.]

5.2. Personnel

[Describe personnel requirements and any known or proposed staffing requirements, if appropriate. Also describe the training, if any, to be provided for the implementation staff.]

5.2.2. Personnel Requirements and Staffing

[Describe the number of personnel, length of time needed, types of skills, and skill levels for the staff during the implementation period. If particular staff members have been selected or proposed for the implementation, identify them and their roles in the implementation. The System Developer may have to work with the Office of Information Services and/or the IT Infrastructure Implementation Agent or Contractor to complete this section of the Implementation Plan.]

5.2.3. Training of Implementation Staff

[Describe the training necessary to prepare support staff for implementing, operating, and maintaining the system. Do not address user training, which is the subject of the Training Plan. Describe the type and amount of training required for each of the following areas, if appropriate:

- System hardware/software installation;
- System support;
- System maintenance and modification;

Present a training curriculum listing the courses that will be provided, a course sequence, and a proposed schedule. If appropriate, identify which courses particular types of staff should attend by job position description. If training will be provided by one or more commercial vendor(s), identify them, the course name(s), and a brief description of the course content. If the training will be provided by CMS staff, provide the course name(s), and an outline of the content of each course. Identify the resources, support materials, and proposed instructors required to teach the course(s).]

5.3. Performance Monitoring

[Describe the performance monitoring tool and techniques utilized during implementation, and how it will be used to help determine if the implementation is successful.]

5.4. Configuration Management

[Describe the configuration management procedures that will be followed and the interactions that will occur for configuration control, change control, and configuration status account reporting.]

6. Implementation Requirements/Procedures by Site

[Describe specific implementation requirements and procedures for each implementation site. If the requirements and procedures differ by site, repeat the following subsections for each site. If they are the same for each site, or if there is only one implementation site, use these subsections only once.]

6.1. Site Identification

[Provide the name or identifying information for the specific site or sites to be discussed in the following subsections.]

6.1.1. Site Requirements

[Define the site-specific requirements that must be met for the orderly implementation of the system or situation. Describe the site-specific hardware, software, data, facilities, and materials not previously described in Section 5.1, Infrastructure & Data Support.]

6.1.2. Site Implementation Details

[Address the specifics of the implementation for this site.]

6.1.2.1. Implementation Team

[If an implementation team is required, describe its composition and the tasks to be performed at this site by each team member.]

6.1.2.2. Implementation Schedule

[Provide a schedule of activities, including planning and preparation, to be accomplished during implementation at this site. Describe the required tasks in chronological order with the beginning and ending dates of each task, the key person(s) responsible for the task, dependencies, and milestones. If appropriate, charts and graphics may be used to present the schedule.]

6.1.2.3. Implementation Procedures

[Provide a sequence of detailed procedures required to accomplish the specific hardware and software implementation at this site. If necessary, other documents may be referenced. For example, the Version Description Document (VDD) should be referenced for the software installation instructions. A checklist of the installation events may be provided to record the results of the process. If the site operations startup is an important factor in the implementation, then address startup procedures in some detail. If the system will replace an already operating system, then address the startup and cutover processes in detail. If there is a period of parallel operations with an existing system, address the startup procedures that include technical and operations support during the parallel cycle and the consistency of data within the databases of the two systems.]

6.1.2.4. Database Environment

[Describe the database environment where the system software and database(s), if any, will be installed. Include a description of the different types of database and library environments (e.g., test, training, and production databases). Include the host computer database operating procedures, database file and library naming conventions, database system generation parameters, and any other information needed to effectively establish the system database environment. Include database administration procedures for testing changes, if any, to the database management system before the system implementation.]

6.1.2.5. Operations Procedures

[Describe operations procedures utilized during implementation. If these operations procedures will continue to be utilized during operations and maintenance activities (e.g., restart and recovery procedures), then they should be described in the Operator Manual, and the applicable Operator Manual sections referenced here.]

6.1.3. Site Post-Implementation Verification

[Describe the process for reviewing the site implementation and deciding if it was successful. This information will especially be utilized during the Operational Readiness Review (ORR) for

determining if the site is ready for full operational support in the production environment. Describe how any noted discrepancies or issues will be rectified.]

6.1.4. Site Rollback Plan

[Provide the detailed steps and actions required to restore the site to the original, pre-implementation condition in the event that implementation is unsuccessful.]

Appendices

[Utilize appendices to facilitate ease of use and maintenance of the Implementation Plan. Each appendix should be referenced in the main body of the document where that information would normally have been provided.]

Glossary

[Provide clear and concise definitions for terms used in the Implementation Plan that may be unfamiliar to readers of the document.]